

## Emissions Inventory Help Sheet For Vehicle Refinishers

Applies to refinishing vehicles and mobile equipment (primarily automobiles, trucks, trailers and motorcycles) and service departments

### What forms do I need?

**Business Form** – Your form is preprinted with your permit information. Verify and correct any preprinted information that has changed since your last emission report.

**Evaporative Process Form** – We recommend you use the attached Evaporative Process Forms, which are partly filled out for body shops. Dealerships should also include emissions from other aspects of their business, such as gasoline storage tanks and service department cleaning materials.

**Off-Site Recycling/Disposal Form** – This form is required if you choose to claim waste shipped off site as a reduction of emissions.

**Data Certification/Fee Calculation Form** – This form summarizes emissions from all other forms and requires an official signature assuring accuracy and completeness.

All of these forms are discussed in detail in our “Instructions for Reporting 2002 Annual Air Pollution Emissions.”

This Help Sheet regards the Evaporative Process Form specifically for the vehicle refinishing industry. If you need help after reviewing this Help Sheet, please call us at (602) 506-6790.

### What do I need to report?

Report liquid and semi-liquid materials you used during the year. We recommend you group similar materials, such as all primers (on line 1 of sample form), all topcoats (regardless of color or brand, on line 5). If you use data provided by your supplier, attach a copy. Otherwise, you should attach a brief explanation of what is included in each group and how the average emission factor was determined. See the example for calculating a weighted average on page 18 in the “Instructions for Reporting 2002 Annual Air Pollution Emissions.”

Report materials of which you used **15 gallons or more** (after grouping similar materials):

| <b>Do Report VOC-Containing Materials:</b>  |
|---|
| <ul style="list-style-type: none"><li>• Paints, primers, sealers, coatings, thinners, reducing solvents (see list on forms)</li><li>• Paint gun cleaner (gun wash)</li><li>• Body filling compound (such as Bondo) if it contains VOC</li><li>• Cleaning solvents used on rags or in a device, such as a parts washer</li><li>• Spray cleaners (16 oz. equals one pound – reportable if you used 100 lb. or more)</li><li>• Spray lubricants, such as WD-40</li><li>• Gasoline storage tank (See separate Help Sheet for Fuel Storage and Handling)</li></ul> |

| <b>Don't Report:</b>   |
|--|
| <ul style="list-style-type: none"><li>• Acetone</li><li>• Paints and solvents that have no VOC content</li><li>• Motor or transmission oils</li><li>• Brake or windshield fluids</li></ul> |

### How do I fill out the Evaporative Process Form?

**Line 1: Description** – Add anything to this line that better describes your business, particularly if you specialize in a certain type of vehicle.

**Line 2: Tier Code** – Use preprinted examples: 080421 for paint-related materials, and 080103 for cleaning and lubricating.

**Lines 3-5:** See “Instructions for Reporting 2002 Annual Air Pollution Emissions.”

Line 6: Applies only to a site that has gasoline storage tank(s) with a capacity of 250 gal or more. Get separate Evaporative Process Form and Help Sheet for Fuel Storage and Handling, available on the internet at [www.maricopa.gov/envsvc/air/ei](http://www.maricopa.gov/envsvc/air/ei) or call (602) 506-6790.

Column 7: You should use the ID numbers from your prior year report. Otherwise, you may use the ID numbers on the attached forms or select your own.

Column 8: “Stacks” for this report apply only to a location that had 20,000 pounds or more of VOC emissions in one year. If this applies to you, refer to the “Instructions for Reporting 2002 Annual Air Pollution Emissions.”

Column 9: Categories of materials have been preprinted for your convenience. The list includes common names of materials in use at a body shop. You may add to or change any category names as appropriate to make it more meaningful or recognizable for your business. Enter any additional materials needed to completely report your emissions. Cross out any that are duplicates or not used.

Column 10: Report the number of gallons you used of each material during the year. Base this number on purchase records or information from your supplier, not an estimate.

Column 12: An emission factor is a number used to calculate pounds of a pollutant emitted from each gallon of coating or solvent. See the next section labeled “How do I determine the emission factors?”

Column 13: This column is where you report total pounds of VOC in liquid waste shipped off site. It allows you to subtract VOCs that were containerized and disposed of instead of being evaporated. Taking credit for waste disposal is optional. If you want to take credit for waste, see below, “What about waste recycling or disposal?”

Columns 14 and 15: Not applicable to body shops or dealerships.

Column 16: Calculated emissions in pounds (see below, “How do I calculate my emissions?”).

### **How do I determine the emission factors (column 12)?**

Emission factors used for this report are *not* necessarily the same as the VOC content used to determine compliance with County Rules, although both may be expressed as “lb/gal.” A common source of information for VOC content is the Material Safety Data Sheet (MSDS). Some manufacturers issue Environmental Data Sheets. If there are different values for “Material VOC” and “Coating VOC,” the correct emission factor for this report is “Material VOC.” It is the VOC lb/gal as purchased. If you find only VOC g/l (grams per liter), multiply that number by 0.00834 to calculate lb/gal.

### **What about waste recycling or disposal?**

If some of your materials are shipped off site for recycling or disposal, you have the option of claiming reduced VOC emissions. The only waste that qualifies must be of materials reported in column 9, so for example, waste oil does not qualify.

If you want to report reduced VOC emissions because of VOC in the waste, you must also fill out an Off-Site Recycling/Disposal Form. The pounds of pollutant sent off site are calculated on the Off-Site Recycling/Disposal Form and reported on the Evaporative Process Form in column 13. Section 5 of the Off-Site Recycling/Disposal Form divides the total pounds of VOC in the waste among the applicable materials and you should you put this same information in Column 13 of the Evaporative Process Form. You may not claim VOC in the waste of a material to be as much as or more than the VOC in that material.

Taking credit for waste disposal is optional. See the “Instructions for Reporting 2002 Annual Air Pollution Emissions.” We suggest you estimate the VOC content of body shop waste material to be between 75 and 90% of the VOC lb/gal of the weighted average of materials included or the original cleaning solvent. If you distill your waste, VOC in the waste hauled away will be considerably lower; check with your waste hauler.

### **How do I calculate my emissions?**

Calculate emissions for each material: (column 10 × column 12) – column 13. Put the result in column 16. This may not be 0 or a negative number.

**Evaporative Process Form 2002****BODY SHOP / VEHICLE REFINISHING**

Permit number(s) \_\_\_\_\_

1- Process Type/Description: Vehicle body refinishing2- Process TIER Code: 080421**SOLVENT USE: SURFACE COATING - AUTO REFINISHING**3- Seasonal Throughput Percent: Dec-Feb \_\_\_\_\_ % Mar-May \_\_\_\_\_ % Jun-Aug \_\_\_\_\_ % Sep-Nov \_\_\_\_\_ % **← Usually 25% each, must total 100%.**

4- Normal Operating Schedule: Hours/Day \_\_\_\_\_ Days/Week \_\_\_\_\_ Hours/Year \_\_\_\_\_

5- Typical Hours of Operation (military time) Start \_\_\_\_\_ End \_\_\_\_\_

6- For STORAGE TANKS only. **Does not apply here.****Columns 14 & 15 do not apply.**

| 7          | 8              | 9                        | 10                 |           | 11                  | 12              |                    | 13                                 | 14                   | 15         |                      |        | 16                           |
|------------|----------------|--------------------------|--------------------|-----------|---------------------|-----------------|--------------------|------------------------------------|----------------------|------------|----------------------|--------|------------------------------|
| Process ID | Stack ID(s) ** | Material Type            | Annual Usage Input | lb or gal | VOC, HAP&NON or NHx | Emission Factor | EF Units (lbs per) | Pounds of pollutant* sent off site | Capture % Efficiency | Control ID | Control % Efficiency | Code** | Estimated Emissions (lbs/yr) |
| 1          |                | Primers                  |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 2          |                | Bases                    |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 3          |                | Clear coats              |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 4          |                | Sealers                  |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 5          |                | Topcoats                 |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 6          |                | Enamels                  |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 7          |                | Catalysts                |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 8          |                | Activators               |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 9          |                | Retarders                |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 10         |                | Accelerators             |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 11         |                | Reducers                 |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 12         |                | Solvents                 |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 13         |                | Thinners                 |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 14         |                | Strippable booth coating |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 15         |                | Body filling compounds   |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 16         |                |                          |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |
| 17         |                |                          |                    | gal       | VOC                 |                 | 1b/gal             |                                    | %                    |            | %                    |        |                              |

\* If you have off-site recycling/disposal of any of the materials listed above, you must complete an Off-Site Recycling/Disposal Form to receive credit for reduced emissions.

\*\* **Column 8 applies only if your site emits at least 20,000 lb of VOC.**

**Evaporative Process Form 2002**
**CLEANING SOLVENTS**  
 Include Body Shop and Service Department

Permit number(s) \_\_\_\_\_

1- Process Type/Description: **Cleaners for surface preparation, spray guns and parts**2- Process TIER Code: **080103** **SOLVENT USE: DEGREASING - COLD CLEANING**3- Seasonal Throughput Percent: Dec-Feb \_\_\_\_\_ % Mar-May \_\_\_\_\_ % Jun-Aug \_\_\_\_\_ % Sep-Nov \_\_\_\_\_ % **← Usually 25% each, must total 100%.**

4- Normal Operating Schedule: Hours/Day \_\_\_\_\_ Days/Week \_\_\_\_\_ Hours/Year \_\_\_\_\_

5- Typical Hours of Operation (military time) Start \_\_\_\_\_ End \_\_\_\_\_

6- For STORAGE TANKS only. **Does not apply here.****Columns 14 & 15 do not apply.**

| 7          | 8           | 9  | 10                    |           | 11                           | 12              |                       | 13                                    | 14                      | 15         |                         |        | 16                              |
|------------|-------------|--|-----------------------|-----------|------------------------------|-----------------|-----------------------|---------------------------------------|-------------------------|------------|-------------------------|--------|---------------------------------|
| Process ID | Stack ID(s) | Material Type<br>(specify name)            | Annual Usage<br>Input | lb or gal | VOC,<br>HAP&NON<br>or<br>NHx | Emission Factor | EF Units<br>(lbs per) | Pounds of pollutant*<br>sent off site | Capture %<br>Efficiency | Control ID | Control %<br>Efficiency | Code** | Estimated Emissions<br>(lbs/yr) |
| 51         |             | Surface cleaning/<br>preparation materials |                       | gal       | VOC                          |                 | 1b/gal                |                                       | %                       |            | %                       |        |                                 |
| 52         |             | Paint gun cleaner                          |                       | gal       | VOC                          |                 | 1b/gal                |                                       | %                       |            | %                       |        |                                 |
| 53         |             | Solvents used in parts washer              |                       | gal       | VOC                          |                 | 1b/gal                |                                       | %                       |            | %                       |        |                                 |
| 54         |             | Spray cleaners                             |                       | gal       | VOC                          |                 | 1b/gal                |                                       | %                       |            | %                       |        |                                 |
| 55         |             |  |                       | gal       | VOC                          |                 | 1b/gal                |                                       | %                       |            | %                       |        |                                 |
| 56         |             |  |                       | gal       | VOC                          |                 | 1b/gal                |                                       | %                       |            | %                       |        |                                 |
| 57         |             |  |                       | gal       | VOC                          |                 | 1b/gal                |                                       | %                       |            | %                       |        |                                 |
| 58         |             |  |                       | gal       | VOC                          |                 | 1b/gal                |                                       | %                       |            | %                       |        |                                 |

\* If you have off-site recycling/disposal of any of the materials listed above, you must complete an Off-Site Recycling/Disposal Form to receive credit for reduced emissions.

\*\* Column 8 applies only if your site emits at least 20,000 lb of VOC.